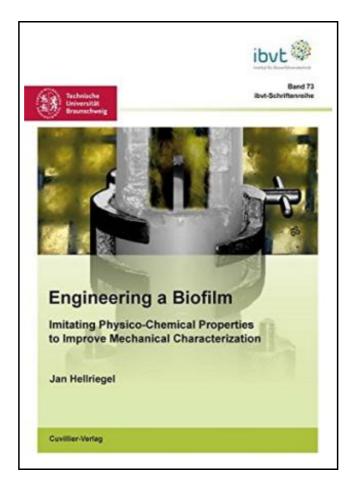
Engineering a Biofilm



Filesize: 5.5 MB

Reviews

Very useful for all group of people. It is amongst the most incredible pdf i actually have read through. Its been written in an extremely straightforward way and it is just right after i finished reading through this pdf by which basically modified me, change the way i think.

(Felicia Nikolaus)

ENGINEERING A BIOFILM



Cuvillier Verlag Jul 2014, 2014. Taschenbuch. Book Condition: Neu. Neuware - Biofilms play a major role in material cycles and contribute to technical systems significantly. Despite their interference with the functionality of technical equipment or the product quality their ability to catabolize toxins and metabolize pharmaceutically relevant substances increases the interest in biofilm-based biotransformations. However, so far there is a lack of appropriate models that allow anticipating the mechanical stability of biofilms in particular during detachment processes. The main objective of this work was the development of a hydrogel based physico-chemical and growth independent biofilm imitate to investigate mechanical, primarily fluid dynamical stresses and their influence on growth and detachment effects of biofilms. Verification was achieved by comparison with real single culture biofilms. Single culture biofilms of Pseudomonas putida KT2440 were cultivated in a biofilm tube reactor and grown on different surfaces, e.g., tube walls, surface-modified object slides, plastic and iron nettings as well as membrane filters. The establishment of on-line analytics allowed the automatic measurement of dissolved oxygen, pH, temperature and planktonic cell growth by optical density in the cultivation broth. Image acquisition of the biofilm surface supported the observation of biofilm development in terms of growth and detachment. A hydrogel based on gellan was established as simplified artificial biofilm system, which behaves like a viscoelastic fluid. The degree of cross-linking at different gellan levels was modified by the addition of mono-and divalent ions (Na+, Mg2+) and the influence on the material constants in terms of storage (G') and loss (G") modulus was determined. Experiments and evaluation in the predefined design space were supported by Central Composite Design (CCD), an experimental design technique. The developed gellan-based hydrogel allows mimicking the mechanical properties of a biofilm excluding biological growth effects. It can now be used to validate further characterization methods...

- Read Engineering a Biofilm Online
- Download PDF Engineering a Biofilm

Related Kindle Books



Psychologisches Testverfahren

Reference Series Books LLC Nov 2011, 2011. Taschenbuch. Book Condition: Neu. 249x191x7 mm. This item is printed on demand - Print on Demand Neuware - Quelle: Wikipedia. Seiten: 100. Kapitel: Myers-Briggs-Typindikator, Keirsey Temperament Sorter, DISG,...

Read Book »



The Java Tutorial (3rd Edition)

Pearson Education, 2001. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Praise for "The Java' Tutorial, Second Edition" includes: "This book...

Read Book »



Programming in D

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

Read Book »



Adobe Indesign CS/Cs2 Breakthroughs

Peachpit Press, 2005. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Adobe InDesign is taking the publishing world by storm and...

Read Book »



Have You Locked the Castle Gate?

Addison-Wesley Professional. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Is your computer safe Could an intruder sneak in and steal...

Read Book »



Unplug Your Kids: A Parent's Guide to Raising Happy, Active and Well-Adjusted Children in the Digital Age

Adams Media Corporation. Paperback. Book Condition: new. BRAND NEW, Unplug Your Kids: A Parent's Guide to Raising Happy, Active and Well-Adjusted Children in the Digital Age, David Dutwin, TV. Web Surfing. IMing. Text Messaging. Video

Save ePub »



Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 2: Cat in a Bag (Hardback)

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 \times 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

Save ePub »



Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel's System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers

Rarebooksclub.com, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****. This historic book may have numerous typos and missing text. Purchasers can download

Save ePub »



Millionaire Mumpreneurs: How Successful Mums Made a Million Online and How You Can Do it Too!

Harriman House Publishing. Paperback. Book Condition: new. BRAND NEW, Millionaire Mumpreneurs: How Successful Mums Made a Million Online and How You Can Do it Too!, Mel McGee, Inspiring stories from some of the world's most

Save ePub »



The Three Little Pigs - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd, United Kingdom, 2013. Paperback. Book Condition: New. 222 x 150 mm. Language: English . Brand New Book. In this classic fairy tale, the three little pigs leave home and build their own

Save ePub »